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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/780,418	02/12/2001	Thierry Chapus	PET-1919	8123

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EXAMINER
GRIFFIN, WALTER DEAN

ART UNIT	PAPER NUMBER
1764	7

DATE MAILED: 10/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/780,418	Applicant(s) CHAPUS ET AL.	
	Examiner Walter D. Griffin	Art Unit 1764	

-- Th MAILING DATE of this communication app ars on the cover sh et with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 September 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

The claim rejections under 35 U.S.C. § 112 and the claim objections as described in paper no. 5 have been withdrawn in view of the amendment filed on September 4, 2002.

Claim Objections

Claim 9 is objected to because of the following informalities: The second occurrence of the word "the" in line 1 of claim 9 is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 is indefinite because it is unclear if the expression "the catalyst support" in line 1 refers to the mineral support in step a) or in step c) or refers to both.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 5-8, 10, and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 96/17903.

The WO 96/17903 reference discloses a process for hydrodesulfurizing a hydrocarbon feed such as a kerosene or gas oil. The feed and hydrogen are passed to a first hydrotreatment zone containing a catalyst under conditions sufficient to result in desulfurization. The effluent from the first hydrotreatment zone is then treated by stripping to remove hydrogen, hydrogen sulfide, and volatile hydrocarbons. The resulting liquid hydrocarbon fraction is then passed to a second hydrotreatment zone containing a catalyst under conditions to result in desulfurization. The catalyst used in each hydrotreatment zone can contain cobalt and molybdenum or nickel and molybdenum on a support such as alumina. Process conditions in each hydrotreatment zone

include pressure ranging from about 15 to about 200 bar (1.5 to 20 MPa) and temperature ranging from about 220° to 420°C. The examples indicate that the space velocity in the first hydrotreatment zone is the same as in the second hydrotreatment zone and is equal to 1. Purified hydrogen is also recycled in the process. See page 15, line 13 through page 17, line 9; page 21, lines 9-26; page 23, lines 2-33, the examples, and the claims.

The WO 96/17903 reference does not disclose the amounts of the catalytic metals, does not disclose the relative amounts of the catalysts, and does not disclose the stripping temperature.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the WO 96/17903 reference by utilizing the claimed amounts of the catalytic metals because one having ordinary skill would utilize metal amounts that would result in the desired effect of hydrotreating.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the WO 96/17903 reference by utilizing the claimed relative amounts of the catalysts because each catalyst is individually effective for hydrotreating. Therefore, any combination of the catalysts would also be effective for hydrotreating.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the WO 96/17903 reference by stripping at the claimed temperature because one of ordinary skill in the art would utilize any temperature to provide the desired result.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 96/17903 as applied to claim 1 above, and further in view of Pruiss (3,519,557).

The WO 96/17903 reference does not disclose flashing as in claim 4.

The Pruiss reference discloses flashing to remove lower boiling materials from the effluent from a hydrotreating step. See col. 3, lines 23-46.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the WO 96/17903 reference by flashing the product from the first hydrotreating zone as suggested by Pruiss because flashing will perform a function that is equivalent to the stripping disclosed by the WO 96/17903. The substitution of equivalents is within the level of ordinary skill in the art.

Claims 9 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 96/17903 as applied to claim 1 above, and further in view of Bridge et al. (3,620,968).

The WO 96/17903 reference does not disclose the catalyst components of claims 9 and 11-14.

The Bridge reference discloses hydrotreating catalysts that contain a halogen (i.e., fluorine) and phosphorus in addition to Group VI and VIII metals. See col. 2, line 66 through col. 3, line 10.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the WO 96/17903 reference by including a halogen and phosphorus in the catalyst as suggested by Bridge because the catalyst will have enhanced desulfurization efficacy.

Response to Arguments

The argument that the WO 96/17903 reference does not disclose the amount of catalyst used in the hydrotreatment zones and does not provide any disclosure or motivation to one of ordinary skill in the art to utilize a smaller amount of catalyst in the first step is not persuasive. The examiner points out that the reference does disclose the use of a smaller amount of catalyst in the first zone in, for example, Example 3. In this example, 25% of the catalyst is placed in the first zone. While not disclosing the entire claimed range for amounts of catalyst in the first zone, the examiner asserts that this teaching would suggest the use of smaller amounts of catalyst in the first zone including those relative amounts claimed with the expectation of a successful process resulting.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter D. Griffin whose telephone number is 703-305-3774. The examiner can normally be reached on Monday-Friday 6:30 to 4:00 with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marian Knode can be reached on 703-308-4311. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

Walter D. Griffin
Primary Examiner
Art Unit 1764

WG
October 9, 2002